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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,219	03/25/2005	Yukihiro Tatsuno	123301	2151

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OLIFF & BERRIDGE, PLC
P.O. BOX 320850
ALEXANDRIA, VA 22320-4850

EXAMINER	
KRAMER, DEVON C	
ART UNIT	PAPER NUMBER
3746	
MAIL DATE	DELIVERY MODE
06/02/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/529,219	TATSUNO ET AL.	
	Examiner	Art Unit	
	DEVON C. KRAMER	3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 March 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant's independent claims recite, "the control rotation speed is greater than the actual rotation speed and the deviation calculated by subtracting the control rotation speed from the actual rotation speed is smaller than a predetermined negative value". It is unclear to the examiner what is meant by a large or small negative value. Is -4 a larger negative value than -2 when in fact -4 is a smaller number? Does applicant mean an absolute value? This limitation of the amended claim can not be given weight because it is unclear what applicant is intending to claim. Please note that some of applicant's dependent claims recite similar language.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 9-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akira et al. (JP 2633095; Hereinafter, Akira) in view of Ito et al. (U.S. Patent 5,269,391; Hereinafter, Ito). Note: Citations to Akira are referring to the machine translation included by applicant in the Information Disclosure Statement dated 3/25/2005.

Regarding Claims 9 and 10, Akira discloses a control apparatus of a construction machine that includes a variable displacement hydraulic pump 1 driven by a prime mover 27 and a hydraulic actuator 4 or 21 driven with pressure oil discharged from the hydraulic pump 1 (Paragraph [0010]). A rotation speed detection means 53 for detecting an actual rotation speed of the prime mover 27 comprises a prime mover control means 80 for controlling a rotation speed of the prime mover in accordance with an extent to which the operating means 6 and 6a is operated (Paragraph [0011]). An input torque control means 100 adjusts an input torque for the hydraulic pump 1 based on a deviation between the actual rotation speed detected by the rotation speed detection means and a control rotation speed set through an operation of the operating means 6 and 6a (Paragraph [0010]).

Akira does not disclose that the input torque control means decreases the input torque in response to a deviation between a control rotation speed and an actual rotation speed. However, Ito discloses a torque control apparatus for promptly reducing the output torque of an internal combustion engine in which the integral correction torque is restricted to a negative value range, and a restricted reference torque is subtracted from the reference driving torque (See Ito, Claim 1; Column 58, Lines 3-13). Therefore it would have been obvious to one of ordinary skill in the art at the time of the

invention to modify Akira so that the torque control means decreases torque in relation to an actual and control rotation speed, as is disclosed by Ito. This would allow the target driving torque to coincide with the actual driving torque (See Ito, Abstract).

Regarding Claims 11 and 17, Akira discloses that the input torque control means 100 sets an adjustment amount of the input torque to zero if the control rotation speed is greater than the actual rotation speed and the deviation between them is below the predetermined value (Paragraph [0021]).

Regarding Claims 12 and 18, Akira discloses that the input torque control device executes control to increase the input torque in correspondence with increase in the deviation if the control rotation speed Ns is smaller than the actual rotation speed Nr, whereby the amendment torque deltaT increases according to the change in engine speed deltaN (Paragraph [0004]). If the control rotation speed Ns is greater than the actual rotation speed Nr and the deviation between them is larger than or equal to the predetermined value, a rate of change deltaT of the input torque is set greater than a rate of change of the input torque set when the control rotation speed Ns is smaller than the actual rotation speed Nr (Paragraph [0005])..

Regarding Claims 13 and 19, Akira discloses that the hydraulic actuator is a hydraulic motor for traveling (Paragraph [0013]), and that the operating member 6a is a travel pedal (Paragraph [0014]).

Regarding Claims 14 and 20, Akira discloses a travel detection device 101h that detects traveling, which is done by determining which function generator is operational (Paragraph 0023]).

Regarding Claims 15 and 21, Akira discloses that the control apparatus is to be used for construction equipment, including a wheeled hydraulic excavator (Paragraph [0002]).

Regarding Claim 16, Akira discloses a method for calculating an input torque which is implemented by a hydraulic Circuit 60 and includes at least a variable displacement hydraulic pump 1 driven by a prime mover 27 and a hydraulic actuator 4 or 21 driven with pressure oil discharged from the hydraulic pump 1. The method further includes calculating a standard torque in correspondence with a deviation between a control rotation speed and an actual rotation speed of the prime mover 27, and setting a correction torque to zero if the control rotation speed is greater than the actual rotation speed and the deviation between them is smaller than or equal to a predetermined value (Paragraph [0021]). Akira does not disclose that the correction torque is set to a negative value if the deviation is larger than or equal to the predetermined value and that the input torque is calculated by adding the correction torque to the standard torque. However, Ito teaches that a predetermined negative value is added to a correction torque when a vehicle wheel slippage is detected as having a negative value (Claim 2; Column 58, Lines 22-25). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Akira so that a negative torque is added to the correction torque as is disclosed by Ito. This would

provide for smooth acceleration (Ito Column 1, Lines 13-18), as Ito describes the method prevents slipping in vehicle wheels, and likewise it would be obvious to use this method in construction machinery in order to achieve better control over a hydraulic pump instead of vehicle wheels.

Response to Arguments

Applicant's arguments filed 3/4/08 have been fully considered but they are not persuasive. Applicant's arguments are directed toward limitations which are not clear to the examiner. An explanation of why these limitations are not clear can be found in the 112 rejection above. Because it is unclear what is meant by applicant's newly added limitations, the prior rejection stands.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to DEVON C. KRAMER at telephone number (571)272-7118.

Devon C Kramer
SPE
Art Unit 3746

/Devon C Kramer/

Supervisory Patent Examiner, Art Unit 3746